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Annex I

ACTIVE SUBSTANCES CONTAINED IN PLANT PROTECTION PRODUCTS AUTHORISED FOR USE IN ORGANIC PRODUCTION AS REFERRED TO IN POINT (a) OF ARTICLE 24(1) OF REGULATION (EU) 2018/848

The active substances listed in this Annex may be contained in plant protection products used in organic production as set out in this Annex, provided that these plant protection products are authorised pursuant to Regulation (EC) No 1107/2009. These plant protection products shall be used in compliance with the conditions set out in the Annex to Implementing Regulation (EU) No 540/2011 and in accordance with the conditions specified in the authorisations granted by the Member States where they are used. More restrictive conditions for use in organic production are specified in the last column of each table below.

In accordance with Article 9(3) of Regulation (EU) 2018/848, safeners, synergists and co-formulants as components of plant protection products, and adjuvants that are to be mixed with plant protection products shall be allowed for use in organic production, provided that they are authorised pursuant to Regulation (EC) No 1107/2009. The substances in this Annex may only be used for the control of pests as defined in Article 3(24) of Regulation (EU) 2018/848.

In accordance with point 1.10.2 of Part II of Annex II to Regulation (EU) 2018/848, these substances may only be used where plants cannot be adequately protected from pests by measures provided for in point 1.10.1 of that Part II, in particular by the use of biological control agents, such as beneficial insects, mites and nematodes complying with the provisions of Regulation (EU) No 1143/2014 of the European Parliament and of the Council[1].

For the purposes of this Annex, active substances are divided into following subcategories:

1. Basic substances

Basic substances listed in Part C of the Annex to Implementing Regulation (EU) No 540/2011 and based on food and from plant or animal origin as defined in Article 2 of Regulation (EC) No 178/2002 of the European Parliament and of the Council[2] may be used for plant protection in organic production. Such basic substances are marked with an asterisk in the table below. They shall be used in accordance with the uses, conditions and restrictions set in the relevant

[1] Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species (OJ L 317, 4.11.2014, p. 35).

[2] Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (OJ L 31, 1.2.2002, p. 1).

review reports[3] and taking into account the additional restrictions, if any, in the last column of the table below.

Other basic substances listed in Part C of the Annex to Implementing Regulation (EU) No 540/2011 and not based on food from plant or animal origin may be used for plant protection in organic production only when they are listed in the table below. Such basic substances shall be used in accordance with the uses, conditions and restrictions set in the relevant review reports[3] and taking into account the additional restrictions, if any, in the right column of the table below.

Basic substances shall not be used as herbicides.

Number and Part of Annex[4]	CAS	Name	Specific conditions and limits
1C		*Equisetum arvense* L.*	
2C	9012-76-4	Chitosan hydrochloride*	obtained from *Aspergillus* or organic aquaculture or from sustainable fisheries, as defined in Article 2 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council[5]
3C	57-50-1	Sucrose*	
4C	1305-62-0	Calcium Hydroxide	
5C	90132-02-8	Vinegar*	
6C	8002-43-5	Lecithins*	
7C	-	*Salix* spp. Cortex*	
8C	57-48-7	Fructose*	
9C	144-55-8	Sodium hydrogen carbonate	
10C	92129-90-3	Whey*	

[3] Available in the Pesticides Database: https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/active-substances/?event=search.as

[4] Listing according to Implementing Regulation (EU) No 540/2011, numbers and which category: Part A active substances deemed to have been approved under Regulation (EC) No 1107/2009, B, active substances approved under Regulation (EC) No 1107/2009, C basic substances, D low-risk active substances and E candidates for substitution.

[5] Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354 28.12.2013, p. 22).

11C	7783-28-0	Diammonium phosphate	only in traps
12C	8001-21-6	Sunflower oil*	
14C	84012-40-8 90131-83-2	*Urtica* spp. (*Urtica dioica* extract) (*Urtica urens* extract)*	
15C	7722-84-1	Hydrogen peroxide	
16C	7647-14-5	Sodium chloride	
17C	8029-31-0	Beer*	
18C	-	Mustard seeds powder*	
20C	8002-72-0	Onion oil*	
21C	52-89-1	L-cysteine (E 920)	
22C	8049-98-7	Cow milk*	
23C	-	*Allium cepa** L. bulb extract	
		Quassia* extracted from *Quassia amara* L.	only as insecticide, repellent only if authorised by Member States under Article 53 of Regulation (EC) No 1107/2009
		Other basic substances based on food and from plant or animal origin*	

2. Low risk active substances

Low risk active substances, other than micro-organisms, listed in Part D of the Annex to Implementing Regulation (EU) No 540/2011 may be used for plant protection in organic production when they are listed in the table below or elsewhere in this Annex. Such low risk active substances shall be used in accordance with the uses, conditions and restrictions pursuant to Regulation (EC) No 1107/2009 and taking into account the additional restrictions, if any, in the last column of the table below.

Number and Part of Annex[6]	CAS	Name	Specific conditions and limits
2D		COS-OGA	
3D		Cerevisane and other products based on fragments of cells of micro-	Not from GMO origin

[6] Listing according to Implementing Regulation (EU) No 540/2011, numbers and which category: Part A active substances deemed to have been approved under Regulation (EC) No 1107/2009, B, active substances approved under Regulation (EC) No 1107/2009, C basic substances, D low-risk active substances and E candidates for substitution.

		organisms	
5D	10045-86-6	Ferric phosphate (iron (III) orthophosphate)	
12D	9008-22-4	Laminarin	Kelp shall be obtained from organic aquaculture or from sustainable fisheries, as defined in Article 2 of Regulation (EU) No 1380/2013

3. Micro-organisms

All micro-organisms listed in Parts A, B and D of the Annex to Implementing Regulation (EU) No 540/2011 may be used in organic production, provided that they are not from GMO origin and only when used in accordance with the uses, conditions and restrictions set in the relevant review reports[3]. Micro-organisms including viruses are biological control agents that are considered as active substances by Regulation (EC) No 1107/2009.

4. Active substances not included in any of the above categories

The active substances as approved pursuant to Regulation (EC) No 1107/2009 and listed in the table below may be used as plant protection products in organic production only when they are used in accordance with the uses, conditions and restrictions pursuant to Regulation (EC) No 1107/2009 and taking into account the additional restrictions, if any, in the right column of the table below.

Number and part of Annex[7]	CAS	Name	Specific conditions and limits
139A	131929-60-7 131929-63-0	Spinosad	
225A	124-38-9	Carbon dioxide	
227A	74-85-1	Ethylene	only on bananas and potatoes; however, it may also be used on citrus as part of a strategy for the prevention of fruit fly

[7] Listing according to Implementing Regulation (EU) No 540/2011, numbers and which category: Part A active substances deemed to have been approved under Regulation (EC) No 1107/2009, B, active substances approved under Regulation (EC) No 1107/2009, C basic substances, D low-risk active substances and E candidates for substitution.

			damage
230A	i.a. 67701-09-1	Fatty acids	all uses authorised, except herbicide
231A	8008-99-9	Garlic extract *(Allium sativum)*	
234A	CAS No not allocated CIPAC No 901	Hydrolysed proteins excluding gelatine	
244A	298-14-6	Potassium hydrogen carbonate	
249A	98999-15-6	Repellents by smell of animal or plant origin/sheep fat	
255A and others		Pheromones and other semiochemicals	only in traps and dispensers
220A	1332-58-7	Aluminium silicate (kaolin)	
236A	61790-53-2	Kieselgur (diatomaceous earth)	
247A	14808-60-7 7637-86-9	Quartz sand	
343A	11141-17-6 84696-25-3	Azadirachtin (Margosa extract)	extracted from Neem tree seeds (*Azadirachta indica*)
240A	8000-29-1	Citronella oil	all uses authorised, except herbicide
241A	84961-50-2	Clove oil	all uses authorised, except herbicide
242A	8002-13-9	Rape seed oil	all uses authorised, except herbicide
243A	8008-79-5	Spearmint oil	all uses authorised, except herbicide
56A	8028-48-6 5989-27-5	Orange oil	all uses authorised, except herbicide
228A	68647-73-4	Tea tree oil	all uses authorised, except herbicide
246A	8003-34-7	Pyrethrins extracted from plants	
292A	7704-34-9	Sulphur	
294A 295A	64742-46-7 72623-86-0 97862-82-3 8042-47-5	Paraffin oils	

345A	1344-81-6	Lime sulphur (calcium polysulphide)	
44B	9050-36-6	Maltodextrin	
45B	97-53-0	Eugenol	
46B	106-24-1	Geraniol	
47B	89-83-8	Thymol	
10E	20427-59-2	Copper hydroxide	in accordance with Implementing Regulation (EU) No 540/2011 only uses resulting in a total application of maximum 28 kg of copper per hectare over a period of 7 years may be authorised
10E	1332-65-6 1332-40-7	Copper oxychloride	
10E	1317-39-1	Copper oxide	
10E	8011-63-0	Bordeaux mixture	
10E	12527-76-3	Tribasic copper sulphate	
40A 5E	52918-63-5 91465-08-6	Pyrethroids (only deltamethrin or lambda-cyhalothrin)	only in traps with specific attractants against *Bactrocera oleae* and *Ceratitis capitata*

Annex II

AUTHORISED FERTILISERS, SOIL CONDITIONERS AND NUTRIENTS REFERRED TO IN POINT (b) OF ARTICLE 24(1) OF REGULATION (EU) 2018/848

Fertilisers, soil conditioners and nutrients[8] listed in this Annex may be used in organic production, provided that they are compliant with

- the relevant Union and national legislations on fertilising products, in particular, where applicable, Regulation (EC) No 2003/2003 and Regulation (EU) 2019/1009; and
- Union legislation on animal by-products, in particular Regulation (EC) No 1069/2009 and Regulation (EU) No 142/2011, in particular Annexes V and XI.

In accordance with point 1.9.6 of Part I of Annex II to Regulation (EU) 2018/848, preparations of micro-organisms may be used to improve the overall condition of the soil or to improve the availability of nutrients in the soil or in the crops.

They may only be used according to the specifications and restrictions of use of those respective Union and national legislations. More restrictive conditions for use in organic production are specified in the right column of the tables.

[8] Covering in particular all the product function categories listed in Part I of Annex I to Regulation (EU) 2019/1009.

Name Compound products or products containing only materials listed hereunder	Description, specific conditions and limits
Farmyard manure	product comprising a mixture of animal excrements and vegetable matter (animal bedding and feed material) factory farming origin forbidden
Dried farmyard manure and dehydrated poultry manure	factory farming origin forbidden
Composted animal excrements, including poultry manure and composted farmyard manure included	factory farming origin forbidden
Liquid animal excrements	use after controlled fermentation and/or appropriate dilution factory farming origin forbidden
Composted or fermented mixture of household waste	product obtained from source separated household waste, which has been submitted to composting or to anaerobic fermentation for biogas production only vegetable and animal household waste only when produced in a closed and monitored collection system, accepted by the Member State maximum concentrations in mg/kg of dry matter: cadmium: 0.7; copper: 70; nickel: 25; lead: 45; zinc: 200; mercury: 0.4; chromium (total): 70; chromium (VI): not detectable
Peat	use limited to horticulture (market gardening, floriculture, arboriculture, nursery)
Mushroom culture wastes	the initial composition of the substrate shall be limited to products of this Annex
Dejecta of worms (vermicompost) and insect frass-substrate mixture	where relevant in accordance with Regulation (EC) No 1069/2009
Guano	
Composted or fermented mixture of vegetable matter	product obtained from mixtures of vegetable matter, which have been submitted to composting or to anaerobic fermentation for biogas production
Biogas digestate containing animal by-products co-digested with material of plant or animal origin as listed in this Annex	animal by-products (including by-products of wild animals) of category 3 and digestive tract content of category 2 (categories as defined in Regulation (EC) No 1069/2009)

	factory farming origin forbidden the processes have to be in accordance with Regulation (EU) No 142/2011 not to be applied to edible parts of the crop
Products or by-products of animal origin as below: Blood meal Hoof meal Horn meal Bone meal or degelatinised bone meal Fish meal Meat meal Feather, hair and skin meal (‘chiquette’) Wool Fur (1) Hair Dairy products Hydrolysed proteins (2)	(1) Maximum concentration in mg/kg of dry matter of chromium (VI): not detectable (2) Not to be applied to edible parts of the crop
Products and by-products of plant origin for fertilisers	e.g.: oilseed cake meal, cocoa husks, malt culms
Hydrolysed proteins of plant origin	
Algae and algae products	as far as directly obtained by: (i) physical processes including dehydration, freezing and grinding (ii) extraction with water or aqueous acid and/or alkaline solution (iii) fermentation only from organic or sustainable algae production, in accordance with Article 2 of Regulation (EU) No 1380/2013 or collection
Sawdust and wood chips	wood not chemically treated after felling
Composted bark	wood not chemically treated after felling
Wood ash	from wood not chemically treated after felling

Soft ground rock phosphate	product obtained by grinding soft mineral phosphates and containing tricalcium phosphate and calcium carbonate as essential ingredients minimum content of nutrients (percentage by weight): 25 % P_2O_5 phosphorus expressed as P_2O_5 soluble in mineral acids, at least 55 % of the declared content of P_2O_5 being soluble in 2 % formic acid particle size: - at least 90 % by weight able to pass through a sieve with a mesh of 0,063 mm - at least 99 % by weight able to pass through a sieve with a mesh of 0,125 mm until 15 July 2022, cadmium content less than or equal to 90 mg/kg of P_20_5; from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Aluminium-calcium phosphate	product obtained in amorphous form by heat treatment and grinding, containing aluminium and calcium phosphates as essential ingredients minimum content of nutrients (percentage by weight): 30 % P_2O_5 phosphorus expressed as P_2O_5 soluble in mineral acids, at least 75 % of the declared content of P_2O_5 being soluble in alkaline ammonium citrate (Joulie) particle size: - at least 90 % by weight able to pass through a sieve with a mesh of 0,160 mm - at least 98 % by weight able to pass through a sieve with a mesh of 0,630 mm until 15 July 2022, cadmium content less than or equal to 90 mg/kg of P_20_5; from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply use limited to basic soils (pH > 7,5)
Basic slag (Thomas phosphates or Thomas slag)	product obtained in iron-smelting by treatment of the phosphorus melts and containing calcium silicophosphates as its essential ingredients minimum content of nutrients (percentage by weight): 12 % P_2O_5 phosphorus expressed as phosphorus pentoxide soluble in mineral acids, at least 75 % of the declared content of phosphorus pentoxide being soluble in 2 % citric acid or P_2O_5

	phosphorus expressed as phosphorus pentoxide soluble in 2% citric acid particle size: - at least 75 % able to pass through a sieve with a mesh of 0,160 mm - at least 96 % able to pass through a sieve with a mesh of 0,630 mm from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Crude potassium salt	product obtained from crude potassium salts minimum content of nutrients (percentage by weight): 9 % K_2O potassium expressed as water- soluble K_2O 2 % MgO magnesium in the form of water- soluble salts, expressed as magnesium oxide from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Potassium sulphate, possibly containing magnesium salt	product obtained from crude potassium salt by a physical extraction process, containing possibly also magnesium salts
Stillage and stillage extract	ammonium stillage excluded
Calcium carbonate, for instance: chalk, maerl, ground limestone, Breton ameliorant, (maerl), phosphate chalk	only of natural origin
Mollusc waste	only from organic aquaculture or from sustainable fisheries, in accordance with Article 2 of Regulation (EU) No 1380/2013
Egg shells	factory farming origin forbidden
Magnesium and calcium carbonate	only of natural origin e.g. magnesian chalk, ground magnesium, limestone
Magnesium sulphate (kieserite)	only of natural origin
Calcium chloride solution	only for foliar treatment of apple trees, to prevent deficit of calcium
Calcium sulphate (gypsum)	product of natural origin containing calcium sulphate at various degrees of hydration minimum content of nutrients (percentage per weight): 25 % CaO 35 % SO_3 calcium and sulphur expressed as total CaO + SO_3 fineness of grind:

	- at least 80 % to pass through a sieve with a 2 mm mesh width, - at least 99 % to pass through a sieve with a 10 mm mesh width from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Industrial lime from sugar production	by-product of sugar production from sugar beet and sugar cane
Industrial lime from vacuum salt production	by-product of the vacuum salt production from brine found in mountains
Elemental sulphur	until 15 July 2022: as listed in accordance with Part D of Annex I to Regulation (EC) No 2003/2003 from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Inorganic Micronutrient Fertilisers	until 15 July 2022: as listed in accordance with Part E of Annex I to Regulation (EC) No 2003/2003; from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Sodium chloride	
Stone meal, clays and clay minerals	
Leonardite (Raw organic sediment rich in humic acids)	only if obtained as a by-product of mining activities
Humic and fulvic acids	only if obtained by inorganic salts/solutions excluding ammonium salts; or obtained from drinking water purification
Xylite	only if obtained as a by-product of mining activities (e.g. by-product of brown coal mining)
Chitin (Polysaccharide obtained from the shell of crustaceans)	obtained from organic aquaculture or from sustainable fisheries, in accordance with Article 2 of Regulation (EU) No 1380/2013
Organic[9] rich sediment from fresh water bodies formed under exclusion of oxygen (e.g. sapropel)	only organic sediments that are by-products of fresh water body management or extracted from former freshwater areas when applicable, extraction should be done in a way to cause minimal impact on the aquatic system only sediments derived from sources free from contaminations of pesticides, persistent organic pollutants and petrol like substances

[9] Here 'organic' is used in the sense of organic chemistry, not organic farming

	until 15 July 2022: maximum concentrations in mg/kg of dry matter: cadmium: 0,7; copper: 70; nickel: 25; lead: 45; zinc: 200; mercury: 0,4; chromium (total): 70; chromium (VI): not detectable from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply
Biochar - pyrolysis product made from a wide variety of organic materials of plant origin and applied as a soil conditioner	only from plant materials, when treated after harvest only with products included in Annex I until 15 July 2022: maximum value of 4 mg polycyclic aromatic hydro-carbons (PAHs) per kg dry matter (DM) from 16 July 2022, the relevant limits for contaminants set in Regulation (EU) 2019/1009 apply

Annex III

AUTHORISED PRODUCTS AND SUBSTANCES FOR USE AS FEED OR IN FEED PRODUCTION

Part A: Authorised non-organic feed material of plant, algal, animal or yeast origin or feed material of microbial or mineral origin referred to in point (c) of Article 24(1) of Regulation (EU) 2018/848

(1) FEED MATERIALS OF MINERAL ORIGIN

Number in feed catalogue[10]	Name	Specific conditions and limits
11.1.1	Calcium carbonate	
11.1.2	Calcareous marine shells	
11.1.4	Maerl	
11.1.5	Lithotamnium	
11.1.13	Calcium gluconate	
11.2.1	Magnesium oxide	
11.2.4	Magnesium sulphate anhydrous	
11.2.6	Magnesium chloride	
11.2.7	Magnesium carbonate	
11.3.1	Dicalcium phosphate	
11.3.3	Monocalcium phosphate	
11.3.5	Calcium-magnesium phosphate	
11.3.8	Magnesium phosphate	
11.3.10	Monosodium phosphate	
11.3.16	Calcium sodium phosphate	
11.3.17	Monoammonium phosphate (Ammonium dihydrogen orthophosphate)	only for aquaculture
11.4.1	Sodium chloride	
11.4.2	Sodium bicarbonate	
11.4.4	Sodium carbonate	
11.4.6	Sodium sulphate	
11.5.1	Potassium chloride	

[10] In accordance with Commission Regulation (EU) No 68/2013 of 16 January on the Catalogue of feed materials (OJ L29, 30.1.2013, p. 1).

(2) OTHER FEED MATERIALS

Number In feed catalogue [11]	Name	Specific conditions and limits
10	Meal, oil and other feed materials of fish, mollusc or crustacean origin	provided that they are obtained from fisheries that have been certified as sustainable under a scheme recognised by the competent authority in line with the principles laid down in Regulation (EU) No 1380/2013 provided that they are produced or prepared without chemically synthesised solvents their use is authorised only to non-herbivores livestock the use of fish protein hydrolysate is authorised only for young non-herbivores livestock
10	Meal, oil and other feed materials of fish, mollusc or crustacean origin	for carnivorous aquaculture animals from fisheries that have been certified as sustainable under a scheme recognised by the competent authority in line with the principles laid down in Regulation (EU) No 1380/2013, in accordance with point 3.1.3.1(c) of Part III of Annex II to Regulation (EU) 2018/848 derived from trimmings of fish, crustaceans or molluscs already caught for human consumption in accordance with point 3.1.3.3(c) of Part III of Annex II to Regulation (EU) 2018/848, or derived from whole fish, crustaceans or molluscs caught and not used for human consumption in accordance with point 3.1.3.3(d) of Part III of Annex II to Regulation (EU) 2018/848
10	Fishmeal and fish oil	in the grow-out phase, for fish in inland waters, penaeid shrimps and freshwater prawns and tropical freshwater fish from fisheries that have been certified as sustainable under a scheme recognised by the competent authority in line with the principles laid down in Regulation (EU) No 1380/2013, in accordance with point 3.1.3.1(c) of Part III of Annex II to Regulation (EU) 2018/848 only where natural feed in ponds and lake is not available in sufficient quantities, maximum 25 % of fishmeal and 10 % of fish oil in the feed ration of penaeid shrimps and freshwater prawns *(Macrobrachium* spp.) and maximum 10 % of fishmeal or fish oil in the feed ration of simsa catfish (*Pangasius* spp.), in accordance with point 3.1.3.4 (c)(i) and (ii) of Part III of Annex II to Regulation (EU) 2018/848

[11] In accordance with Regulation (EU) No 68/2013.

ex 12.1.5	Yeasts	yeast obtained from *Saccharomyces cerevisiae or Saccharomyces carlsbergensis,* inactivated resulting in absence of live micro-organisms when not available from organic production
ex 12.1.12	Yeast products	fermentation product obtained from *Saccharomyces cerevisiae, Saccharomyces carlsbergensis,* inactivated resulting in absence of live micro-organisms containing yeast parts when not available from organic production
	Cholesterol	product obtained from wool grease (lanolin) by saponification, separations and crystallisation, from shellfish or other sources to secure the quantitative dietary needs of penaeid shrimps and freshwater prawns (*Macrobrachium* spp.) in the grow-out stage and in earlier life stages in nurseries and hatcheries when not available from organic production
	Herbs	in accordance with point (e)(iv) of Article 24(3) of Regulation (EU) 2018/848, in particular: - when not available in organic form - produced/prepared without chemical solvents - maximum 1 % in the feed ration
	Molasses	in accordance with point (e)(iv) of Article 24(3) of Regulation (EU) 2018/848, in particular: - when not available in organic form - produced/prepared without chemical solvents - maximum 1 % in the feed ration
	Phytoplankton and zooplankton	only in the larval rearing of organic juveniles
	specific protein compounds	In accordance with point 1.9.3.1 (c) and 1.9.4.2 (c) of Regulation (EU) 2018/848, in particular: - until 31 December 2026, - when not available in organic form, - produced/prepared without chemical solvents, - for feeding piglets of up to 35 kg or young poultry, - maximum 5 % of the dry matter of feed from agricultural origin per period of 12 months
	Spices	in accordance with point (e)(iv) of Article 24(3) of Regulation (EU) 2018/848, in particular: - when not available in organic form - produced/prepared without chemical solvents - maximum 1 % in the feed ration

Part B: Authorised feed additives and processing aids used in animal nutrition referred to in point (d) of Article 24(1) of Regulation (EU) 2018/848

Feed additives listed in this Part must be authorised under Regulation (EC) No 1831/2003.

The specific conditions set out here are to be applied in addition to the conditions of the authorisations under Regulation (EC) No 1831/2003.

(1) TECHNOLOGICAL ADDITIVES

(a) Preservatives

ID number or functional group	Name	Specific conditions and limits
E 200	Sorbic acid	
E 236	Formic acid	
E 237	Sodium formate	
E 260	Acetic acid	
E 270	Lactic acid	
E 280	Propionic acid	
E 330	Citric acid	

(b) Antioxidants

ID number or functional group	Name	Specific conditions and limits
1b306(i)	Tocopherol extracts from vegetable oils	
1b306(ii)	Tocopherol-rich extracts from vegetable oils (delta rich)	

(c) Emulsifiers, stabilisers, thickeners and gelling agents

ID number or functional group	Name	Specific conditions and limits
1c322, 1c322i	Lecithins	only when derived from organic raw material use restricted to aquaculture animal feed

(d) Binders and anti-caking agents

ID number or functional group	Name	Specific conditions and limits
E 412	Guar gum	
E 535	Sodium ferrocyanide	maximum content: 20 mg/kg NaCl calculated as ferrocyanide anion
E 551b	Colloidal silica	
E 551c	Kieselgur (diatomaceous earth, purified)	
1m558i	Bentonite	
E 559	Kaolinitic clays, free of asbestos	
E 560	Natural mixtures of steatites and chlorite	
E 561	Vermiculite	
E 562	Sepiolite	
E 566	Natrolite-Phonolite	
1g568	Clinoptilolite of sedimentary origin	
E 599	Perlite	

(e) Silage additives

ID number or functional group	Name	Specific conditions and limits
1k	Enzymes, micro-organisms	only authorised to ensure adequate fermentation
1k236	Formic acid	
1k237	Sodium formate	
1k280	Propionic acid	
1k281	Sodium propionate	

(2) SENSORY ADDITIVES

ID number or functional group	Name	Specific conditions and limits
ex2a	Astaxanthin	only when derived from organic sources, such as organic crustacean shells only in the feed ration for salmon and trout within the limit of their physiological needs if no astaxanthin derived from organic sources are available, astaxanthin from natural sources may be used such as Astaxanthin-rich *Phaffia rhodozyma*
ex2b	Flavouring compounds	only extracts from agricultural products, including Chestnut extract (*Castanea sativa* Mill.)

(3) NUTRITIONAL ADDITIVES

(a) Vitamins, pro-vitamins and chemically well-defined substances having similar effect

ID number or functional group	Name	Specific conditions and limits
ex3a	Vitamins and Provitamins	derived from agricultural products if not available from agricultural products:

		- derived synthetically, only those identical to vitamins derived from agricultural products may be used for monogastric animals and aquaculture animals - derived synthetically, only vitamins A, D and E identical to vitamins derived from agricultural products may be used for ruminants; the use is subject to prior authorisation of the Member States based on the assessment of the possibility for organic ruminants to obtain the necessary quantities of the said vitamins through their feed rations
3a920	Betaine anhydrous	only for monogastric animals from organic production; if not available, from natural origin

(b) Compounds of trace elements

ID number or functional group	Name	Specific conditions and limits
3b101	Iron(II) carbonate (siderite)	
3b103	Iron(II) sulphate monohydrate	
3b104	Iron(II) sulphate heptahydrate	
3b201	Potassium iodide	
3b202	Calcium iodate, anhydrous	
3b203	Coated granulated calcium iodate anhydrous	
3b301	Cobalt(II) acetate tetrahydrate	
3b302	Cobalt(II) carbonate	
3b303	Cobalt(II) carbonate hydroxide (2:3) monohydrate	
3b304	Coated granulated cobalt(II) carbonate	
3b305	Cobalt(II) sulphate heptahydrate	
3b402	Copper(II) carbonate dihydroxy monohydrate	
3b404	Copper (II) oxide	
3b405	Copper(II) sulphate pentahydrate	
3b409	Dicopper chloride trihydroxide	
3b502	Manganese (II) oxide	

3b503	Manganous sulfate, monohydrate	
3b603	Zinc oxide	
3b604	Zinc sulphate heptahydrate	
3b605	Zinc sulphate monohydrate	
3b609	Zinc chloride hydroxide monohydrate	
3b701	Sodium molybdate dihydrate	
3b801	Sodium selenite	
3b802	Coated granulated sodium selenite	
3b803	Sodium selenate	
3b810, 3b811, 3b8.12, 3b813 and 3b817	Selenised yeast inactivated a.o.	

(c) Amino acids, their salts and analogues

ID number or functional group	Name	Specific conditions and limits
3c3.5.1 and 3c352	L-histidine monohydrochloride monohydrate	produced through fermentation may be used in the feed ration for salmonids when the feed sources listed in point 3.1.3.3 of Part II of Annex II to Regulation (EU) 2018/848, do not provide a sufficient amount of histidine to meet the dietary needs of the fish

(4) ZOOTECHNICAL ADDITIVES

ID number or functional group	Name	Specific conditions and limits
4a, 4b, 4c and 4d	Enzymes and microorganism	

Annex IV

AUTHORISED PRODUCTS FOR CLEANING AND DISINFECTION REFERRED TO IN POINTS (e), (f) AND (g) OF ARTICLE 24(1) OF REGULATION (EU) 2018/848

Part A

Products for the cleaning and disinfection of ponds, cages, tanks, raceways, buildings or installations used for animal production

Part B

Products for the cleaning and disinfection of buildings and installations used for plant production, including for storage on an agricultural holding

Part C

Products for cleaning and disinfection in processing and storage facilities

Part D

Products referred to in Article 12(1) of Regulation (EU) 2018/848

The following products or products containing the following active substances as listed in Annex VII to Regulation (EC) No 889/2008 cannot be used as biocidal products:

– caustic soda;

– caustic potash;

– oxalic acid;

– natural essences of plants;

– nitric acid;

– phosporic acid;

– nitric acid;

– phosporic acid;

– sodium carbonate;

– copper sulphate;

– potassium permanganate;

– tea seed cake made of natural camelia seed;

– humic acid;

– peroxyacetic acids.

Annex V

AUTHORISED PRODUCTS AND SUBSTANCES FOR USE IN THE PRODUCTION OF PROCESSED ORGANIC FOOD AND OF YEAST USED AS FOOD OR FEED

Part A: Authorised food additives and processing aids referred to in point (a) of Article 24(2) of Regulation (EU) 2018/848

SECTION A1 — FOOD ADDITIVES, INCLUDING CARRIERS

The organic foodstuffs to which food additives may be added are within the limit of authorisations given in accordance with Regulation (EC) No 1333/2008.

The specific conditions and restrictions set out here are to be applied in addition to the conditions of the authorisations under Regulation (EC) No 1333/2008.

For the purpose of the calculation of the percentages referred to in Article 30(5) of Regulation (EU) 2018/848, food additives marked with an asterisk in the column of the code number shall be calculated as ingredients of agricultural origin.

Code	Name	Organic foodstuffs to which it may be added	Specific conditions and limits
E 153	Vegetable carbon	edible cheese rind of ashy goat cheese Morbier cheese	
E 160b(i)*	Annatto bixin	Red Leicester cheese Double Gloucester cheese Cheddar Mimolette cheese	
E 160b(ii)*	Annatto norbixin	Red Leicester cheese Double Gloucester cheese Cheddar Mimolette cheese	
E 170	Calcium carbonate	products of plant and animal origin	shall not be used for colouring or calcium enrichment of products
E 220	Sulphur dioxide	fruit wines (wine made from fruits other than grapes, including cider and perry) and mead with and without added sugar	100 mg/l (maximum levels available from all sources, expressed as SO_2 in mg/l)
E 223	Sodium	crustaceans	

	metabisulphite		
E 224	Potassium metabisulphite	fruit wines (wine made from fruits other than grapes, including cider and perry) and mead with and without added sugar	100 mg/l (maximum levels available from all sources, expressed as SO_2 in mg/l)
E250	Sodium nitrite	meat products	may only be used, if it has been demonstrated to the satisfaction of the competent authority that no technological alternative, giving the same guarantees and/or allowing to maintain the specific features of the product, is available not in combination with E252 maximum ingoing amount expressed as $NaNO_2$: 80 mg/kg, maximum residual amount expressed as $NaNO_2$: 50 mg/kg
E252	Potassium nitrate	meat products	may only be used, if it has been demonstrated to the satisfaction of the competent authority that no technological alternative, giving the same guarantees and/or allowing to maintain the specific features of the product, is available not in combination with E250 maximum ingoing amount expressed as $NaNO_3$: 80 mg/kg, maximum residual amount expressed as $NaNO_3$: 50 mg/kg
E 270	Lactic acid	products of plant and animal origin	
E 290	Carbon dioxide	products of plant and animal origin	
E 296	Malic acid	products of plant origin	
E 300	Ascorbic acid	products of plant origin meat products	
E 301	Sodium ascorbate	meat products	may only be used in connection with nitrates and nitrites

E 306*	Tocopherol-rich extract	products of plant and animal origin	antioxidant
E 322*	Lecithins	products of plant origin milk products	only from organic production
E 325	Sodium lactate	products of plant origin milk-based and meat products	
E 330	Citric acid	products of plant and animal origin	
E 331	Sodium citrates	products of plant and animal origin	
E 333	Calcium citrates	products of plant origin	
E 334	Tartaric acid (L(+)-)	products of plant origin mead	
E 335	Sodium tartrates	products of plant origin	
E 336	Potassium tartrates	products of plant origin	
E 341(i)	Monocalcium phosphate	self-raising flour	raising agent
E 392*	Extracts of Rosemary	products of plant and animal origin	only from organic production
E 400	Alginic acid	products of plant origin milk products	
E 401	Sodium alginate	products of plant origin milk products sausages based on meat	
E 402	Potassium alginate	products of plant origin milk-based products	
E 406	Agar	products of plant origin milk-based products and meat products	
E 407	Carrageenan	products of plant origin	

		milk-based products	
E 410*	Locust bean gum	products of plant and animal origin	only from organic production
E 412*	Guar gum	products of plant and animal origin	only from organic production
E 414*	Arabic gum	products of plant and animal origin	only from organic production
E 415	Xanthan gum	products of plant and animal origin	
E 417	Tara gum	products of plant and animal origin	thickener only from organic production
E 418	Gellan gum	products of plant and animal origin	high-acyl form only only from organic production
E 422	Glycerol	plant extracts flavourings	only from plant origin solvent and carrier in plant extracts and flavourings humectant in gel capsules surface coating of tablets only from organic production
E 440(i)*	Pectin	products of plant origin milk-based products	
E 460	Cellulose	gelatine	
E 464	Hydroxypropyl methyl cellulose	products of plant and animal origin	encapsulation material for capsules
E 500	Sodium carbonates	products of plant and animal origin	
E 501	Potassium carbonates	products of plant origin	
E 503	Ammonium carbonates	products of plant origin	
E 504	Magnesium carbonates	products of plant origin	
E 509	Calcium chloride	Milk-based products	coagulation agent

E 516	Calcium sulphate	products of plant origin	carrier
E 524	Sodium hydroxide	'Laugengebäck' flavourings	surface treatment acidity regulator
E 551	Silicon dioxide	herbs and spices in dried powdered form, flavourings propolis	
E 553b	Talc	sausages based on meat	surface treatment
E 901	Beeswax	confectionery	glazing agent only from organic production
E 903	Carnauba wax	confectionery citrus fruit	glazing agent mitigating method for mandatory extreme cold treatment of fruit as a mandatory quarantine measure against harmful organisms in accordance with Commission Implementing Directive (EU) 2017/1279[12] only from organic production
E 938	Argon	products of plant and animal origin	
E 939	Helium	products of plant and animal origin	
E 941	Nitrogen	products of plant and animal origin	
E 948	Oxygen	products of plant and animal origin	
E 968	Erythritol	products of plant and animal origin	only from organic production without using ion exchange technology

[12] Commission Implementing Directive (EU) 2017/1279 of 14 July 2017 amending Annexes I to V to Council Directive 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community (OJ L 184, 15.7.2017, p. 33).

SECTION A2 — PROCESSING AIDS AND OTHER PRODUCTS, WHICH MAY BE USED FOR PROCESSING OF INGREDIENTS OF AGRICULTURAL ORIGIN FROM ORGANIC PRODUCTION

The specific conditions and restrictions set out here are to be applied in addition to the conditions of the authorisations under Regulation (EC) No 1333/2008.

Name	Only authorised for the processing of the following organic foodstuffs	Specific conditions and limits
Water	products of plant and animal origin	drinking water within the meaning of Council Directive 98/83/EC[13]
Calcium chloride	products of plant origin sausages based on meat	coagulation agent
Calcium carbonate	products of plant origin	
Calcium hydroxide	products of plant origin	
Calcium sulfate	products of plant origin	coagulation agent
Magnesium chloride (or nigari)	products of plant origin	coagulation agent
Potassium carbonate	Grapes	drying agent
Sodium carbonate	products of plant and animal origin	
Lactic acid	Cheese	for the regulation of the pH of the brine bath in cheese production
L(+)lactic acid from fermentation	plant protein extracts	
Citric acid	products of plant and animal origin	
Sodium hydroxide	Sugar(s) oil from plant origin excluding olive oil plant protein extracts	
Sulphuric acid	gelatine sugar(s)	

[13] Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption (OJ L 330, 5.12.1998, p. 32).

Hop extract	sugar	only for antimicrobial purposes from organic production, if available
Pine rosin extract	sugar	only for antimicrobial purposes from organic production, if available
Hydrochloric acid	gelatine Gouda-, Edam and Maasdammer cheeses, Boerenkaas, Friese and Leidse Nagelkaas	gelatine production in compliance with Regulation (EC) No 853/2004 of the European Parliament and of the Council[14] for the regulation of the pH of the brine bath in the processing of cheeses
Ammonium hydroxide	Gelatine	gelatine production in compliance with Regulation (EC) No 853/2004
Hydrogen peroxide	Gelatine	gelatine production in compliance with Regulation (EC) No 853/2004
Carbon dioxide	products of plant and animal origin	
Nitrogen	products of plant and animal origin	
Ethanol	products of plant and animal origin	solvent
Tannic acid	products of plant origin	filtration aid
Egg white albumin	products of plant origin	
Casein	products of plant origin	
Gelatin	products of plant origin	
Isinglass	products of plant origin	
Vegetable oils	products of plant and animal origin	greasing, releasing or antifoaming agent only from organic production
Silicon dioxide gel or colloidal solution	products of plant origin	
Activated carbon (CAS-7440-44-0)	products of plant and animal origin	
Talc	products of plant origin	in compliance with the specific purity criteria for food additive E 553b
Bentonite	products of plant origin mead	sticking agent for mead
Cellulose	products of plant origin	

[14] Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin (OJ L 139, 30.4.2004, p. 55)

	gelatine	
Diatomaceous earth	products of plant origin gelatine	
Perlite	products of plant origin gelatine	
Hazelnut shells	products of plant origin	
Rice meal	products of plant origin	
Beeswax	products of plant origin	releasing agent only from organic production
Carnauba wax	products of plant origin	releasing agent only from organic production
Acetic acid/vinegar	products of plant origin; fish	only from organic production from natural fermentation
Thiamin hydrochloride	fruit wines, cider, perry and mead	
Diammonium phosphate	fruit wines, cider, perry and mead	
Wood fibre	products of plant and animal origin	the source of timber should be restricted to certified, sustainably harvested wood wood used must not contain toxic components (post-harvest treatment, naturally occurring toxins or toxins from micro-organisms)

Part B: Authorised non-organic agricultural ingredients to be used for the production of processed organic food referred to in point (b) of Article 24(2) of Regulation (EU) 2018/848

Name	Specific conditions and limits
Algae Arame (*Eisenia bicyclis),* unprocessed as well as products of first-stage processing directly related to these products.	
Algae Hijiki (*Hizikia fusiforme),* unprocessed as well as products of first-stage processing directly related to these products.	

Bark of the Pau d'arco tree *Handroanthus impetiginosus* ('lapacho'*)*	only for use in Kombucha and tea mixtures
Casings	from natural raw materials of animal or from plant origin material
Gelatin	from other sources than porcine
Milk mineral powder/liquid	only when used for its sensory function to replace wholly or partly sodium chloride
Wild fishes and wild aquatic animals, unprocessed as well as products derived therefrom by processes.	only from fisheries that have been certified as sustainable under a scheme recognised by the competent authority in line with the principles laid down in Regulation (EU) No 1380/2013, in accordance with point 3.1.3.1(c) of Part III of Annex II to Regulation (EU) 2018/848 only when not available in organic aquaculture

Part C: Authorised processing aids and other products for the production of yeast and yeast products referred to in point (c) of Article 24(2) of Regulation (EU) 2018/848

Name	Primary yeast	Yeast production/ confection/ formulation	Specific conditions and limits
Calcium chloride	X		
Carbon dioxide	X	X	
Citric acid	X		for the regulation of the pH in yeast production
Lactic acid	X		for the regulation of the pH in yeast production
Nitrogen	X	X	
Oxygen	X	X	
Potato starch	X	X	for filtering only from organic production
Sodium carbonate	X	X	for the regulation of the pH
Vegetable oils	X	X	greasing, releasing or anti-foaming agent only from organic production

Part D: Authorised products and substances for the production and conservation of organic grapevine products of the wine sector referred to in point 2.2. of Part VI of Annex II to Regulation (EU) 2018/848

Name	ID numbers	References in Annex I to Delegated Regulation (EU) 2019/934	Specific conditions and limits
Air		Part A, Table 1, points 1 and 8	
Gaseous oxygen	E 948 CAS 17778-80-2	Part A, Table 1, point 1 Part A, Table 2, point 8.4	
Argon	E 938 CAS 7440-37-1	Part A, Table 1, point 4 Part A, Table 2, point 8.1	may not be used for bubbling
Nitrogen	E 941 CAS 7727-37-9	Part A, Table 1, points 4, 7 and 8 Part A, Table 2, point 8.2	
Carbon dioxide	E 290 CAS 124-38-9	Part A, Table 1, points 4 and 8 Part A, Table 2, point 8.3	
Pieces of oak wood		Part A, Table 1, point 11	
Tartaric acid (L(+)-)	E 334 CAS 87-69-4	Part A, Table 2, point 1.1	
Lactic acid	E 270	Part A, Table 2, point 1.3	
Potassium L(+)-tartrate	E 336(ii) CAS 921- 53-9	Part A, Table 2, point 1.4	
Potassium bicarbonate	E 501(ii) CAS 298- 14-6	Part A, Table 2, point 1.5	
Calcium carbonate	E 170 CAS 471-34-1	Part A, Table 2, point 1.6	
Calcium sulphate	E 516	Part A, Table 2, point 1.8	
Sulphur dioxide	E 220 CAS 7446-09-5	Part A, Table 2, point 2.1	the maximum sulphur dioxide content shall not exceed 100 milligrams per

Potassium bisulphite	E 228 CAS 7773-03-7	Part A, Table 2, point 2.2	litre for red wines as referred to in point A.1.(a) of Part B of Annex I to Delegated Regulation (EU) 2019/934 and with a residual sugar level lower than 2 grams per litre the maximum sulphur dioxide content shall not exceed 150 milligrams per litre for white and rosé wines as referred to in point A.1.(b) of Part B of Annex I to Delegated Regulation (EU) 2019/934 and with a residual sugar level lower than 2 grams per litre for all other wines, the maximum sulphur dioxide content applied in accordance with Part B of Annex I to Delegated Regulation (EU) 2019/934 shall be reduced by 30 milligrams per litre
Potassium metabisulphite	E 224 CAS 16731-55-8	Part A, Table 2, point 2.3	
L ascorbic acid	E 300	Part A, Table 2, point 2.6	
Charcoal for oenological use		Part A, Table 2, point 3.1	
Diammonium hydrogen phosphate	E 342/CAS 7783-28-0	Part A, Table 2, point 4.2	
Thiamine hydrochloride	CAS 67-03-8	Part A, Table 2, point 4.5	
Yeast autolysates		Part A, Table 2, point 4.6	
Yeast cell walls		Part A, Table 2, point 4.7	
Inactivated yeasts		Part A, Table 2, point 4.8 Part A, Table 2, point 10.5 Part A, Table 2, point 11.5	
Edible gelatine	CAS 9000-70-8	Part A, Table 2, point 5.1	derived from organic raw material if available

Wheat protein		Part A, Table 2, point 5.2	derived from organic raw material if available
Peas protein		Part A, Table 2, point 5.3	derived from organic raw material if available
Potatoes protein		Part A, Table 2, point 5.4	derived from organic raw material if available
Isinglass		Part A, Table 2, point 5.5	derived from organic raw material if available
Casein	CAS 9005-43-0	Part A, Table 2, point 5.6	derived from organic raw material if available
Potassium caseinates	CAS 68131-54-4	Part A, Table 2, point 5.7	
Egg albumin	CAS 9006-59-1	Part A, Table 2, point 5.8	derived from organic raw material if available
Bentonite	E 558	Part A, Table 2, point 5.9	
Silicon dioxide (gel or colloidal solution)	E 551	Part A, Table 2, point 5.10	
Tannins		Part A, Table 2, point 5.12 Part A, Table 2, point 6.4	derived from organic raw material if available
Chitosan derived from *Aspergillus niger*	CAS 9012-76-4	Part A, Table 2, point 5.13 Part A, Table 2, point 10.3	
Yeast protein extracts		Part A, Table 2, point 5.15	derived from organic raw material if available
Potassium alginate	E 402/CAS 9005-36-1	Part A, Table 2, point 5.18	
Potassium hydrogen tartrate	E336(i)/CAS 868-14-4	Part A, Table 2, point 6.1	
Citric acid	E 330	Part A, Table 2, point 6.3	
Metatartaric acid	E 353	Part A, Table 2, point 6.7	
Gum arabic	E 414/CAS 9000-01-5	Part A, Table 2, point 6.8	derived from organic raw material if available
Yeast mannoproteins		Part A, Table 2, point 6.10	
Pectin lyases	EC 4.2.2.10	Part A, Table 2, point 7.2	only for oenological purposes in clarification

Pectin methylesterase	EC 3.1.1.11	Part A, Table 2, point 7.3	only for oenological purposes in clarification
Polygalacturonase	EC 3.2.1.15	Part A, Table 2, point 7.4	only for oenological purposes in clarification
Hemicellulase	EC 3.2.1.78	Part A, Table 2, point 7.5	only for oenological purposes in clarification
Cellulase	EC 3.2.1.4	Part A, Table 2, point 7.6	only for oenological purposes in clarification
Yeasts for wine production		Part A, Table 2, point 9.1	organic if available
Lactic acid bacteria		Part A, Table 2, point 9.2	
Copper citrate	CAS 866-82-0	Part A, Table 2, point 10.2	
Aleppo pine resin		Part A, Table 2, point 11.1	
Fresh lees		Part A, Table 2, point 11.2	only from organic production

Annex VI

PRODUCTS AND SUBSTANCES AUTHORISED FOR USE IN ORGANIC PRODUCTION IN CERTAIN AREAS OF THIRD COUNTRIES PURSUANT TO ARTICLE 45(2) OF REGULATION (EU) 2018/848